

WHAT IS CLAIMED IS:

1. A method for manufacturing a solar cell module which comprises at least one photovoltaic element in which a metal oxide layer made of a metal oxide forms an outermost surface part of the photovoltaic element at a light incident side, and a sealing resin layer formed on the metal oxide layer, the method comprising:

a step of providing water on a surface of the metal oxide layer, the water being chemically adsorbed onto the surface of the metal oxide layer;

a step of irradiating the metal oxide layer with electromagnetic waves for a predetermined period of time so that the contact angle of the water is 60° or less, the electromagnetic waves having energy larger than the band gap of the metal oxide; and

a sealing step of forming the sealing resin layer on the metal oxide layer subsequent to the step of irradiating the metal oxide layer.

2. The method for manufacturing a solar cell module, according to Claim 1, further comprising:

a step of washing the surface of the metal oxide layer with water before the sealing step is performed.

3. The method for manufacturing a solar cell module, according to Claim 1, further comprising:

a step of performing heat treatment for a predetermined time in a vacuum atmosphere before the sealing step is performed.

4. The method for manufacturing a solar cell module, according to Claim 1, wherein the radiation intensity of the electromagnetic waves is in the range of 10 to 1,000 mW/cm².

5. The method for manufacturing a solar cell module, according to Claim 1, wherein the wavelength of the electromagnetic waves is 400 nm or less.

6. The method for manufacturing a solar cell module, according to Claim 1, wherein the electromagnetic waves are radiated using a discharge tube lamp.

7. The method for manufacturing a solar cell module, according to Claim 1, wherein the sealing resin layer contains one or more materials selected from the group consisting of cross-linking agents, thermal-oxidation inhibitors, ultraviolet absorbers, and photo-oxidation inhibitors.

8. The method for manufacturing a solar cell module, according to Claim 7, wherein the sealing resin layer contains an ultraviolet absorber.

9. A solar cell module manufactured by the method of manufacturing a solar cell module, according to Claim 1.